In Fig. 1, a D/A converter 10 converts a digital signal Xi into an analog current. Two transistors 20 and 21 form a first current mirror circuit 11 which uses the D/A converter as a current source. Likewise, two transistors 22 and 23 form a second current mirror circuit 12 weighed doubly, four transistors 24 to 27 form a third current mirror circuit 13 weighed four times, and eight transistors 28 to 35 form a fourth current mirror circuit 14 weighed eight times.

That is, it is assumed that Δ(Xi) represents an output current from the D/A converter. Then, Δ(Xi) also represents an output current from the current mirror circuit 11, $2 \cdot \Delta$(Xi) represents an output current from the current mirror circuit 12, $4 \cdot \Delta$(Xi) represents an output current from the current mirror circuit 13, and $8 \cdot \Delta$(Xi) represents an output current from the current mirror circuit 14.

Next, a pair of transistors 36 and 37 form a switching circuit 15, a pair of transistors 38 and 39 form a switching circuit 16, a pair of transistors 40 and 41 form a switching circuit 17, and a pair of transistors 42 and 43 form a switching circuit 18. The switching circuits 15, 16, 17 and 18 perform switching on the output currents from the current mirror circuits 11, 12, 13 and 14, respectively. These switching circuits are connected to one another at respective output ends where current addition is carried

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out.